

IN THE CLAIMS:

Claims 1-30. (Canceled)

31. (New) An implantable medical device, comprising:

a control circuit to control the operation of the implantable medical device and to obtain physiological data from a patient in which the implantable medical device is implanted;

a communication circuit coupled to the control circuit to transmit the physiological data to an external device;

a battery positioned within the device and coupled to the control circuit to provide power to the control circuit;

a rechargeable battery coupled to the battery in parallel, the rechargeable battery positioned within the device and coupled to the communication circuit to provide power to the communication circuit; and

a sensor coupled to the battery and rechargeable battery to sense the remaining power level of at least one of the battery and rechargeable battery.

32. (New) The implantable medical device of claim 31, wherein the battery comprises at least one of a Li/CF_x-CSVO, Li/CSVO, Li/CF_x, Li/MnO₂, Li/I₂, and Li/SOCl₂ battery.

33. (New) The implantable medical device of claim 31, wherein the rechargeable battery comprises at least one of a lithium-ion and a nickel/metal-hydride battery.

34. (New) The implantable medical device of claim 31, further comprising:

a switch to couple the battery to the communication circuit upon occurrence of a first predetermined event.

35. (New) The implantable medical device of claim 34, wherein the first predetermined event includes the sensor sensing the remaining power level of the rechargeable battery being below a remaining power level threshold.

37. (New) The implantable medical device of claim 24, wherein the switch couples the rechargeable battery to the control circuit upon occurrence of a second predetermined event.

40. (New) The implantable medical device of claim 26, wherein the second predetermined event includes the sensor sensing the remaining power level of the first power source being below a remaining power level threshold.

41. (New) An implantable medical device, comprising:

- a control circuit to control the operation of the implantable medical device and to obtain physiological data from a patient in which the implantable medical device is implanted;

- a communication circuit coupled to the control circuit to transmit the physiological data to an external device;

- a battery positioned within the device and coupled to the control circuit to provide power to the control circuit;

- a rechargeable battery coupled to the battery in parallel, the rechargeable battery positioned within the device and coupled to the communication circuit to provide power to the communication circuit;

- a sensor coupled to the battery and rechargeable battery to sense the remaining power level of at least one of the battery and rechargeable battery; and

- a switch to couple the battery to the communication circuit upon occurrence of a first predetermined event, wherein the first predetermined event includes the sensor sensing the remaining power level of the rechargeable battery being below a remaining power level threshold.

42. (New) A method for incorporating a power source in an implantable medical device, comprising the steps of:

providing power to a control circuit by a first power source positioned within the device, the control circuit obtaining physiological data of a patient in which at least the control circuit is implanted;

providing power to a communication circuit by a second power source positioned within the device; and

transmitting the physiological data from the communication circuit to an external device.

43. (New) The method of claim 42, further comprising:

sensing a remaining power level of the second power source;

determining if the remaining power level has fallen below a predetermined threshold;

and

providing power to the communication circuit by the first power source in response to determining that the remaining power level has fallen below the predetermined threshold.

43. (New) The method of claim 42, further comprising:

sensing a remaining power level of the first power source;

determining if the remaining power level has fallen below a predetermined threshold;

and

providing power to the control circuit by the second power source in response to determining that the remaining power level has fallen below the predetermined threshold.

44. (New) An implantable medical device, comprising:

a control circuit to control the operation of the implantable medical device and to obtain physiological data from a patient in which the implantable medical device is implanted;

a communication circuit coupled to the control circuit to transmit the physiological data to an external device;

a battery positioned within the device and coupled to the control circuit to provide power to the control circuit;

a rechargeable battery coupled to the battery in parallel with a single feed-through, the rechargeable battery positioned within the device and coupled to the communication circuit to provide power to the communication circuit;

a sensor coupled to the battery and rechargeable battery to sense the remaining power level of at least one of the battery and rechargeable battery; and

a switch to couple the battery to the communication circuit upon occurrence of a first predetermined event, wherein the first predetermined event includes the sensor sensing the remaining power level of the rechargeable battery being below a remaining power level threshold.